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For immediate release

### **Jaramillo wins 2010 Rosalind Franklin Young Investigator Award**

ARGONNE, Ill. (May 5, 2010) — The Advanced Photon Source (APS) Users Organization has named Rafael Jaramillo as the recipient of the 2010 Rosalind Franklin Young Investigator Award. The award honors Rosalind Franklin, whose early work with x-ray diffraction was key in determining the structure of DNA, and is given every other year to a very promising young scientist working in synchrotron x-ray research. Jaramillo received the award on May 4 at the 2010 APS/Electron Microscopy Center Users Week meeting held at the U.S. Department of Energy's (DOE) Argonne National Laboratory.

Jaramillo is recognized for furthering understanding of itinerant magnetism and for contributions to the study of quantum matter at high pressure using synchrotron X-ray diffraction. The APS is the largest scientific user facility in the nation, based on the number of researchers carrying out experiments at the APS each year, and is located at Argonne.

Jaramillo received his bachelor's degree in applied physics from Cornell University and his Ph.D. in physics from The University of Chicago. The work recognized by this award resulted from an extensive collaboration between Jaramillo and Yejun Feng, who is now a member of the APS Magnetic Materials Group in the Argonne X-ray Science Division (XSD). Jaramillo is currently a Ziff Environmental Fellow at the Harvard University Center for the Environment and the Harvard School of Engineering and Applied Sciences, where he is developing advanced materials for solar energy conversion.

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*Rosalind Franklin Young Investigator Award 2010—add one*

Jaramillo's work has focused on itinerant magnetism—an ephemeral form of magnetism that arises from interactions among conduction electrons in a metal—and specifically on the question of how magnetism emerges from disorder.

The award recognizes Jaramillo's achievement in integrating three techniques to achieve the required sensitivity: low-temperature studies, high-pressure diamond anvil cells and high-resolution diffraction at XSD beamline 4-ID-D at the APS. This work created a new “toolbox” for measuring condensed matter systems by bringing new high-pressure techniques to a level of precision comparable to long-established methods, such as applied magnetic fields and variable temperatures. As a result, a new set of questions have become open to study, and these new techniques are now being applied at the APS to other condensed matter systems.

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